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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,170

12/15/2004

David Eric Appleford

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02/23/2006

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EXAMINER

SUAREZ, FELIX E

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/518,170

Applicant(s)

APPLEFORD ET AL.

Examiner

Felix E. Suarez

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>15Dec2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Abstract***

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### ***Drawings***

2. The drawings are objected to because:

In FIG. 1, blocks are not labeled.

Correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon et al. (U.S. Patent No. 6,868,538) in view of Rieken (U.S. Patent No. 6,665,817)

With respect to claims 1, 10 and 12, Nixon et al. (hereafter Nixon) teaches a method (or system or a computer program product) for controlling the operation of devices of a hydrocarbon production system, comprising the steps of:

connecting at least one remote master controller to at least two central controllers via a command/signal bus and connecting the at least two central controllers to at least one local controller via a common data bus (see col. 6, lines 32-65 and FIG. 1), Nixon does not teach that; the central controllers being reprogrammable.

But Rieken teaches an embedded reprogrammable logic system. The system consists of a configuration and test controller (CTC), which includes a serial JTAG interface for external control, the embedded target application reprogrammable logic and a hardwired interface to necessary bus/processor core signals (see Rieken; col. 2, lines 39-56 and col. 4, lines 50-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nixon to include the embedded reprogrammable logic system as taught by Rieken, because embedded reprogrammable logic system of Rieken allows an interface for external control to reprogram a controller, as desired.

Nixon further teaches that; at least one local controller being configured to locally control the operation of at least one respective device (see Nixon; col. 13, lines 7-26);

transmitting data between the central controllers and at least one local controller via the common data bus in response to said central controllers receiving signals (see Nixon; col. 13, lines 28-45);

processing said transmitted data within at least one local controller (see Nixon; col. 13, lines 7-26); and

transmitting data between at least one local controller and at least one associated device according to the processed data so as to locally control the operation of at least one device (see Nixon; col. 7, lines 39-59).

With respect to claim 2, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further teaches that, the step of transmitting data between the central controllers and at least one local controller includes transmitting data between the central controllers and the at least one local controller in response to said central controllers receiving signals from any other central controller, or from at least one local controller (see Nixon; col. 8, lines 1-16).

With respect to claim 3, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further the step of transmitting data between at least one master controller and the central controllers so as to remotely monitor the central controllers (see Nixon; col. 13, lines 28-42).

With respect to claim 6, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further teaches the step of

feeding back data signals from at least one device to at least one local controller (see Nixon; col. 8, lines 57-62 and col. 29 line 61 to col. 30 line 4).

With respect to claims 7 and 11, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further teaches the step of feeding back data signals from at least one local controller to the central controllers (see Nixon; col. 8, lines 46-62 and col. 29 line 61 to col. 30 line 4).

With respect to claim 8, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further teaches that, the step of transmitting data between at least one local controller and at least one associated device includes controlling at least one device by at least the steps of:

activating or powering a valve (see Nixon; col. 6, lines 46-51); and  
actuating a pump (see Nixon; col. 6, lines 46-51).

4. Claims 4, 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon et al. (U.S. Patent No. 6,868,538) in view of Rieken (U.S. Patent No. 6,665,817) and Tubel et al. (U.S. Patent No. 6,873,267).

With respect to claim 4, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further teaches the step of:

transmitting data between at least one remote master controller and the central controllers (see Nixon; col. 13, lines 28-42).

Nixon in combination with Rieken, do not teach;

adding at least one device and at least one associated local controller to the hydrocarbon production system.

But Tubel et al. (hereafter Tubel) teaches that, the downhole include sensors associated for sensing pressure, flow, temperature, oil/water content; and the sensors will be used for monitoring the production of hydrocarbons (see Tubel; col. 9, lines 39-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Nixon with Rieken to include downhole sensors as taught by Tubel, because the downhole sensors of Tubel allows to add at least one device associated with the hydrocarbon production, as desired.

Nixon in combination with Rieken, do not teach;

reprogramming the central controllers to enable at least one, said newly added device and at least one local controller to be used in the method.

But Tubel teaches that, the information sent from the remote controller may consist of actual control information, or may consist of data which is used to reprogram the memory in the processor of the surface control and data acquisition system for initiating of automatic control based on sensor information (see Tubel; col. 11, lines 31-39).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Nixon with Rieken to include a control surface processor as taught by Tubel, because the control surface processor of Tubel allows to reprogram the memory in the processor based on sensor information, as desired.

With respect to claim 5, Nixon in combination with Rieken teaches all the features of the claimed invention; and Nixon further the steps of:

transmitting data between at least one remote master controller and the central controllers (see Nixon; col. 13, lines 28-42).

Nixon in combination with Rieken, do not teach;

reprogramming the central controllers to enable the central controllers to control existing local controllers in a different manner.

But Tubel teaches that, the information sent from the remote controller may consist of actual control information, or may consist of data which is used to reprogram the memory in the processor of the surface control and data



acquisition system for initiating of automatic control based on sensor information (see Tubel; col. 11, lines 31-39).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Nixon with Rieken to include a control surface processor as taught by Tubel, because the control surface processor of Tubel allows to reprogram the memory in the processor based on sensor information, as desired.

With respect to claim 9, Nixon in combination with Rieken teaches all the features of the claimed invention; except that Nixon does not teach the step of:

connecting the central controller of one a subsea control module to one or more central controllers contained in one or more other subsea control modules in a field development via the command/signal bus (see col. 11, lines 55-56).

But Tubel teaches, an apparatus for monitoring and controlling oil and gas production wells from a remote location. Tubel teaches, for example the subsurface zones of each well are preferably isolated from one another and each of the wellbores or well sections in communication with the respective subsurface zones is preferably provided with a valve control isolation system. The valve control isolation system is preferably controlled by the surface control system (see Tubel; col. 11, lines 55-66).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Nixon with Rieken to include an apparatus for monitoring and controlling oil and gas production wells

from a remote location as taught by Rieken, because the apparatus for monitoring and controlling oil and gas production wells from a remote location of Rieken allows to connect a surface control system to a control subsurface modules or function blocks, as desired.

Nixon further teaches; transmitting data between any of the central controllers and any of the local controllers contained in a retrievable module (see Nixon; col. 19, lines 8-24).

### ***Conclusion***

#### ***Prior Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bussear et al. [U.S. Patent No. 5,803,167] describes a method for the control of hydrocarbon production.

Kohl et al. [U.S. Patent No. 6,851,444] describes a controller interface with suitable two-way communication link.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix Suarez, whose telephone number is (571) 272-2223. The examiner can normally be reached on weekdays from 8:30 a.m. to 5:00 p.m.

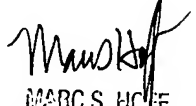
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number

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for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications.

February 17, 2006

F.S.

  
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